



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,308	11/20/2003	David G. Deak	DD-m101	9774
23432	7590	08/02/2006		EXAMINER
COOPER & DUNHAM, LLP 1185 AVENUE OF THE AMERICAS NEW YORK, NY 10036			EDWARDS JR, TIMOTHY	
			ART UNIT	PAPER NUMBER
			2612	

DATE MAILED: 08/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/718,308	DEAK, DAVID G.	
	Examiner Timothy Edwards, Jr.	Art Unit 2612	
<i>-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --</i>			
Period for Reply			
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.			
<ul style="list-style-type: none"> - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication. - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b). 			
Status			
1) <input checked="" type="checkbox"/> Responsive to communication(s) filed on <u>10 May 2006</u> .			
2a) <input type="checkbox"/> This action is FINAL .		2b) <input checked="" type="checkbox"/> This action is non-final.	
3) <input type="checkbox"/> Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.			
Disposition of Claims			
4) <input checked="" type="checkbox"/> Claim(s) <u>1-29</u> is/are pending in the application.			
4a) Of the above claim(s) <u>1-14</u> is/are withdrawn from consideration.			
5) <input type="checkbox"/> Claim(s) _____ is/are allowed.			
6) <input checked="" type="checkbox"/> Claim(s) <u>15-29</u> is/are rejected.			
7) <input type="checkbox"/> Claim(s) _____ is/are objected to.			
8) <input type="checkbox"/> Claim(s) _____ are subject to restriction and/or election requirement.			
Application Papers			
9) <input checked="" type="checkbox"/> The specification is objected to by the Examiner.			
10) <input type="checkbox"/> The drawing(s) filed on _____ is/are: a) <input type="checkbox"/> accepted or b) <input type="checkbox"/> objected to by the Examiner.			
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).			
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).			
11) <input type="checkbox"/> The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.			
Priority under 35 U.S.C. § 119			
12) <input type="checkbox"/> Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).			
a) <input type="checkbox"/> All b) <input type="checkbox"/> Some * c) <input type="checkbox"/> None of:			
1. <input type="checkbox"/> Certified copies of the priority documents have been received.			
2. <input type="checkbox"/> Certified copies of the priority documents have been received in Application No. _____.			
3. <input type="checkbox"/> Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).			
* See the attached detailed Office action for a list of the certified copies not received.			
Attachment(s)			
1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)		4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.	
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)		5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)	
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.		6) <input type="checkbox"/> Other: _____.	

DETAILED ACTION

Allowable Subject Matter

1. The indicated allowability of claim 5 (in office action dated February 6, 2006) is withdrawn in view of the newly discovered reference(s) to Cernik USP 4,471,353. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

2. Claims 24-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term “a full-wave rectifier circuit including a bridge rectifier” in claims 24 and 27 is used by the claim to mean, “there are two rectifiers”, while the accepted meaning is “a bridge rectifier is a full-wave rectifier connected as a bridge circuit.” The term is indefinite because the specification does not clearly redefine the term.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) The invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 15-17, are rejected under 35 U.S.C. 102(e) as being anticipated by Boyd '894.

Considering claim 15, Boyd disclose a self-powered switching device comprising, a) a housing (see col 2, line 67 to col 3, line 3); b) an actuation means (see col 2, lines 53-54); c) a power generating means comprising a plurality of piezoelectric transducers capable of generating a voltage from the physical movement of the actuation means (see col 2, lines 55-60, col 6, lines 25-42, col 7, lines 9-20 and col 11, lines 60-63); d) a transmitter powered by an electrical moment from a switch, for wirelessly transmitting a control signal to a receiver to control the operation of a device (see col 3, lines 4-17).

Considering claim 16, Boyd discloses a) transmitting a signal such that the signal is addressed, so that the signal is unique (see col 3, lines 12-17); b) a receiver means for receiving a signal and a series of programmed instructions and effective to direct an

operation (see col 11, lines 5-14 and lines 29-34); c) a protocol for employing the series of instructions received by the receiver and effective to direct an operation (see col 11, lines 29-34).

Considering claim 17, Boyd discloses, a) power generating means comprising, a rectifier (see col 8, lines 15-18 and lines 52-57); b) a filter and a voltage regulator (see col 8, lines 58-66).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boyd et al.

Considering claim 18, Boyd discloses a) transmitter comprises a microchip transmitter containing encoded data and enabled to transmit this data to a remote antenna (see fig 6, items 40, 50, 60, and 70), except Boyd does not specifically recite providing a specific frequency by virtue of a crystal. Boyd teaches the use of an LC tank circuit which resonates at a specific frequency to produce an RF signal at that frequency (see col 10, lines 52-66). Therefore, it would have been obvious to one of ordinary skill in the art to

use an alternate method of producing a specific frequency such as a crystal because Boyd teaches the desire to send a signal at a specific frequency; b) a remote antenna in communication with a microchip receiver (see col 11, lines 8-11); c) the receiver containing a decoder mask to decode the encoded data received signal (see col 11, lines 8-14); d) the receiver activates a latch and communicate with a driver (see col 3, lines 36-40); e) relay driver being in communication with a relay which in turn is in operative communication with an end appliance (see col 3, lines 9-17); f) and a power supply (see col 11, lines 17-22).

Considering claims 19, 20 Boyd does not specifically recite the plurality of piezoelectric transducers are connected in parallel or series. However, in Boyd discloses the use of a plurality of transducers stacked or placed adjacent to each other to form an array (see col 7, lines 9-20, col 11, lines 60-63 and fig 2). One of ordinary skill in the art would readily recognize the only method of connecting these piezoelectric elements would be either in series or in parallel. Therefore, it would have been obvious to one of ordinary skill in the art the Boyd system would use one of these methods to connect his plurality of piezoelectric elements because Boyd discloses the desire to stack a plurality of transducers or placing the piezoelectric elements adjacent to each other to form an array.

Considering claim 21, Boyd discloses, a) a pair of wires in communication with the piezoelectric transducer (see col 6, lines 59-65); b) a plunger to deform the piezoelectric

actuator and create a voltage (see col 7, lines 9-16 and lines 58-62); except Boyd does not specifically recite a pair of rigid support rods to hold the piezoelectric actuator with the housing. However, Boyd discloses in col 7, lines 36-48 means for holding a piezoelectric actuator in its un-deformed and deformed state. One of ordinary skill in the art would readily recognize the need to hold the piezoelectric actuator in a housing. Therefore, it would have been obvious to one of ordinary skill in the art to use some means to hold the piezoelectric actuator.

3. Claims 22,23,26, are rejected under 35 U.S.C. 103(a) as being unpatentable over Cernik '353.

Considering claim 22, Cernik discloses a self-powered switch comprising, a) a housing (see fig 1b, item 14); b) a coil (see fig 2a, item 38); c) a magnet (see fig 2a, item 34); except Cernik does not specifically recited the magnet being attached by two springs at each end. However, Cernik teaches the use of a reed to give the magnet its needed motion. Therefore, it would have been obvious to one of ordinary skill in the art to modify the motion means of Cernik to be springs, which function the same as the reed (i.e. putting the magnet in motion when required); d) a pair of wires in communication with the coil (see fig 2a, item 38); e) a core (see fig 2a, item 36); except Cernik does not specifically recited a high magnet permeability core to hold the coil and magnet within the housing. One of ordinary skill in the art would readily recognize the need for a means to hold the coil and magnet within the housing, according to the layout of the

components; f) a lever attached to the magnet so that the magnet may oscillate back and further over the coil to produce a voltage (see col 3, lines 11-25). the switch of the Cernik system (see fig 2a, item 30) functionally addresses the lever of the present application; g) a transmitter powered by the produced voltage for wirelessly transmitting a control signal to a receiver to control operation of a device (see col 4, lines 7-20).

Considering claim 23, Cernik does not specifically recite the use of a neodymium type magnet. Applicant admits the use of this type of magnet in a voltage producing circuit is well known in the art. Therefore, it would have been obvious at the time of the invention to use a neodymium type magnet in the Cernik system because of its known properties.

Considering claim 26, Cernik does not specifically recite the use of a carbon aerogel super-capacitor. Applicant admits on page 16 of the specification the use of super-capacitors is well known in the art. Cernik discloses the use of a capacitor for storing a voltage prior to utilizing the voltage. Therefore, it would have been obvious to one of ordinary skill in the art to use any capacitor which would have the charge capacity desired in the Cernik system because Cernik discloses the use of a capacitor for storing a voltage prior to utilizing the voltage.

4. Claims 24,25 are rejected under 35 U.S.C. 102(b) as being anticipated by Cernik '353.

Considering claim 24, Cernik discloses in fig 2a, a) a mechanical activator (30), comprising a magnet (34) which moves relative to a coil (38) which produces an AC voltage signal; b) a bridge rectifier for producing a DC signal (see col 3, lines 28-29 and lines 58-61); c) a transmitter circuit for producing a transmitting signal in response to the DC signal (see col 3, lines 23-27).

Considering claim 25, Cernik discloses the limitation of this claim (see col 3, lines 61-66).

5. Claims 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boyd et al '894, and further in view of Hamel et al '662 (submitted in PTO 892 dated 2/6/06.

Considering claim 27, Boyd discloses, a) a mechanical activator comprising a plurality of piezoelectric elements for producing an AC voltage signal when the elements are mechanically deformed (see col 2, lines 55-66, col 6, lines 25-47, col 7, lines 9-20 and col 8, lines 3-17, also fig 2); except Boyd does not specifically recite the use of a full-wave rectifier circuit. Boyd clearly presents the knowledge a piezoelectric element produces an AC voltage signal when deformed and the use of a rectifying circuit to convert the AC signal into a DC signal (see col 8, lines 3-17 and lines 48-61). One of ordinary skill in the art would readily recognize a system could be designed to use one or both of the pulses produced by a piezoelectric element. Hamel teaches the use of a

bridge rectifier circuit to convert an AC signal produced by a piezoelectric element into a DC signal to power a transmitter circuit (see paragraph 0065 and fig 3a-b). therefore, it would have been obvious to one of ordinary skill in the art to use a bridge rectifier circuit in the Boyd system because both systems are concern with the use of piezoelectric element produced power to transmit a signal. Hamel teaches the use of a bridge rectifier circuit to convert an AC signal produced by a piezoelectric element into a DC signal to power a transmitter circuit is well known in the art.

Considering claims 28 and 29 the limitations of theses claims are interpreted and rejected as stated in claims 19 and 20.

Conclusion

Any inquiry concerning this communication should be directed to Examiner Timothy Edwards, Jr. at telephone number (571) 272-3067. The examiner can normally be reached on Monday-Thursday, 8:00 a.m.-6:00 p.m. The examiner cannot be reached on Fridays.

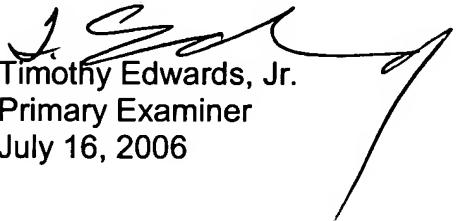
If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber, can be reached at (571) 272-7308.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (571) 272-4700, Mon-Fri., 8:30 a.m.-5:00 p.m.

Any response to this action should be fax to:

(571) 273-8300 (for formal communications intended for entry).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov> or contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Timothy Edwards, Jr.
Primary Examiner
July 16, 2006